



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/933,912	08/20/2001	Tao Chen	010501	7750

23696 7590 07/11/2006  
QUALCOMM INCORPORATED  
5775 MOREHOUSE DR.  
SAN DIEGO, CA 92121

EXAMINER

JUNTIMA, NITTAYA

ART UNIT PAPER NUMBER

2616

DATE MAILED: 07/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/933,912

Applicant(s)

CHEN ET AL.

Examiner

Nittaya Juntima

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-64 is/are pending in the application.
- 4a) Of the above claim(s) 25-32 and 57-64 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-13, 16-24 and 42-56 is/are allowed.
- 6) ☒ Claim(s) 1-9 and 33-41 is/are rejected.
- 7) ☒ Claim(s) 14 and 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This action is in response to the amendment filed on 4/28/2006.
2. The objections to the drawings and specification are withdrawn in view of applicant's amendment.
3. The rejection under 35 U.S.C. 112, second paragraph is also withdrawn in view of applicant's amendment.
4. Claims 25-32 and 57-64 were cancelled.
5. Claims 1-9 and 33-41 are rejected under 35 U.S.C. 103(a).
6. Claims 10-13, 16-24, and 42-56 are allowed.
7. Claims 14 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Claim Objections***

8. Claims 10, 20, and 52 are objected to because of the following informalities:
  - in claim 10, line 9, "were" should be changed to "was;"
  - in claim 20, line 8, "were" should be changed to "was;"
  - in claim 52, line 8, "were" should be changed to "was."

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

Art Unit: 2616

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 14-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 14 recites the limitation "*wherein said determining number of frames that must be received correctly*" in accordance with a determined amount of redundancy" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-2, 4-7, 9, 33-34, 36-39, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fisher et al. ("Fisher") (USPN 6,012,159).

Regarding claim 1, as shown in Fig. 3B, Fisher teaches a method comprising:

Determining a number of frames (the number of original packets) that must be received and decoded correctly by an inner decoder (decoder that performs EDAC decoding in step S6) for an outer decoder (decoder that performs decoding in step S9B) to correctly decode the received frames (the subscriber determines that the number of Y' packets correctly received and decoded by EDAC decoding is equal to the number original packets, then the packets received

are forwarded to a second decoder in order to recover the original file X, col. 7, lines 27-36, 49-52, and col. 8, lines 7-18, see also col. 9, lines 64-col. 10, lines 1, 13-35).

Fisher does not explicitly teach terminating reception of the frames when said determined number of frames was received correctly.

However, since Fisher teaches that if the number of correctly received packets is equal to the number of original packets, the original file can be reconstructed from the correctly received packets (col. 10, lines 13-20) and if the first  $k$  packets are received correctly, then the last  $n-k$  packets can be ignored (col. 9, lines 53-56), it would have been obvious to one skilled in the art at the time the invention was made to modify the teaching of Fisher to include terminating reception of the frames when said determined number of frames was received correctly as recited in the claim. The suggestion/motivation to do so would have been to disregard other packets since sufficient number of packets is already received for the reconstruction of the original file.

Regarding claims 2 and 34, Fisher further teaches that the  $n$  transmitted packets are encoded at the bit level using standard EDAC encoding schemes which provide redundant data bits to the data and  $k$  is the number of original packets (col. 3, lines 1-11, col. 6, lines 24-26), therefore, it is inherent that determining an amount of redundancy ( $n-k$ ) must be included. Fisher further teaches determining the number of frames that must be received correctly in accordance with the determined amount of redundancy (col. 6, lines 24-36 and col. 7, lines 49-52).

Regarding claims 4, 7, 36, and 39, Fisher further teaches that the  $n$  transmitted packets are encoded at the bit level using standard EDAC encoding schemes which provide redundant data bits to the data and  $k$  is the number of original packets (col. 3, lines 1-11, col. 6, lines 24-

Art Unit: 2616

26), therefore, it is inherent that determining an encoding rate of received frames in accordance with the received frames and determining the amount of redundancy in accordance with the encoding rate must be included in order for the receiving end to properly decode the packets (col. 7, lines 31-36).

Regarding claims 5 and 37, Fisher teaches that if k number of packets are received correctly (col. 6, lines 29-36), therefore, determining a minimum number (one) of frames that must be received correctly must be included.

Regarding claims 6 and 38, it is inherent that increasing the determined minimum number of frames that must be received correctly by a first number (one) must be included (since the receiving side has to receive k packets correctly and k is an integer greater than one, and one packet is being received at a time, col. 6, lines 29-36 and col. 7, lines 31-36, therefore, the minimum number of correctly received packets must be increased by one at a time).

Regarding claims 9 and 41, Fisher does not explicitly teach terminating reception of the frames when said determined number of frames was received correctly and a time during which the subscriber station is obligated to receive the frames expired.

However, since However, since Fisher teaches that if the number of correctly received packets is equal to the number of original packets, the original file can be reconstructed from the correctly received packets (col. 10, lines 13-20) and if the first k packets are received correctly, then the last k-n packets can be ignored (col. 9, lines 53-56), it would have been obvious to one skilled in the art at the time the invention was made to modify the teaching of Fisher to include terminating reception of the frames when said determined number of frames was received

correctly and a time during which the subscriber station is obligated to receive the frames expired as recited in the claim. The suggestion/motivation to do so would have been to The suggestion/motivation to do so would have been to disregard other packets since sufficient number of packets is already received for the reconstruction of the original file.

Claim 33 is an apparatus claim corresponding to method claim 1, therefore is rejected under the same reason set forth in the rejection of claim 1. In addition, the apparatus (the receiving end) must include a processor and a storage medium comprising a set of instructions executable by the processor in order for the apparatus to process the receiving packets (col. 9, lines 53-56).

12. Claims 3, 8, 35, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fisher et al. ("Fisher") (USPN 6,012,159) in view of Li (USPN 5,537,410).

Regarding claim 3, 8, 35 and 40, although Fisher further teaches that the n transmitted packets are encoded at the bit level using standard EDAC encoding schemes which provide redundant data bits to the data (col. 3, lines 1-11, col. 7, lines 18-30), Fisher fails to teach providing the amount of redundancy and an encoding rate of received frames independently of the received frames.

However, Li teaches informing the receiving end of the data rate (thereby includes the encoding rate and the amount of redundancy) a frame to be received independently of the frame to be received (as shown in Fig. 4 and in the Abstract, lines 1-6, the data rate of the next frame is indicated in the current frame, therefore, the redundancy and encoding rate of the next frame is provided independently of the next frame).

Given the teaching of Li, it would have been obvious to one skilled in the art at the time the invention was made to modify the teaching of Fisher to include the teaching of Li such that providing the amount of redundancy and an encoding rate of received frames independently of the received frames would be included. The suggestion/motivation to do so would have been to reduce the processing load of the receiving end as suggested by Li (see lines 1-6 of the Abstract).

*Allowable Subject Matter*

13. Claims 10-24 and 42-56 are allowed. The prior art alone or in combination fail to teach or make obvious on the following when considered in combination with other limitations in the claim: terminating reception of the frames when said determined number of frames was received correctly and beginning reception of frames from the identified at least one section as recited in method claim 10 and corresponding apparatus claim 42, terminating reception of the frames when said determined number of frames was received correctly, tuning to a frequency of the destination system and receiving, and receiving service on a channel from at least one section if the at least one section of the destinations system is acquired at the subscriber station as recited in method claim 20 and corresponding apparatus claim 52.

*Conclusion*

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE



Art Unit: 2616

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

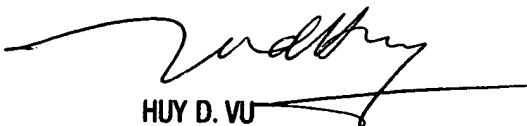
15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nittaya Juntima whose telephone number is 571-272-3120. The examiner can normally be reached on Monday through Friday, 8:00 A.M - 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nittaya Juntima  
July 3, 2006

NS

  
HUY D. VU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600